

**In the Claims:**

Claims 1-101 are pending in the present application. Claims 1-40, 43-44, 46-52, 55-61, 65-71, 74-79, 82-87 and 90-95 and 98-101 have been withdrawn without prejudice to inclusion of these claims in any later filed divisional or continuation application. Claims 42, 63 and 96-97 were canceled by way of Supplemental Amendment filed on September 15, 2003 without prejudice to inclusion of these claims in any later filed divisional or continuation application. Claims 41, 45, 53, 54, 62, 64, 72, 73, 80, 81, 88 and 89 are presently under consideration. Claim 80-81 have been canceled herein. Claim 64 has been amended herein.

Claim 1 (Withdrawn) An allergy vaccine comprising at least one protein selected from the group consisting of an IgE, an IgE receptor, an interleukin involved in production of IgE in a mammal, a receptor for an interleukin involved in production of IgE in a mammal, an interferon-alpha, an interferon-alpha receptor, a histamine, a histamine receptor, a leukotriene, a leukotriene receptor, in a pharmaceutically-acceptable carrier.

Claim 2 (Withdrawn) The allergy vaccine of claim 1, wherein said mammal is selected from the group consisting of a human, a non-human primate, a horse, a cow, a pig, a goat, a dog, a cat, a rodent.

Claim 3 (Withdrawn) The allergy vaccine of claim 2, where the animal is a human.

Claim 4 (Withdrawn) The allergy vaccine of claim 1, wherein said interleukin is selected from the group consisting of IL-3, IL-4, IL-5, IL-6, IL-10, and IL-13.

Claim 5 (Withdrawn) The allergy vaccine of claim 4, wherein said interleukin is selected from the group consisting of IL-3, IL-4, IL-5, IL-6, and IL-13.

Claim 6 (Withdrawn) The allergy vaccine of claim 4, wherein said interleukin is selected from the group consisting of IL-3, IL-4, IL-5, and IL-13.

Claim 7 (Withdrawn) The allergy vaccine of claim 4, wherein said interleukin is selected from the group consisting of IL-4, IL-5, and IL-13.

Claim 8 (Withdrawn) The allergy vaccine of claim 4, wherein said interleukin is selected from the group consisting of IL-4 and IL-5.

Claim 9 (Withdrawn) The allergy vaccine of claim 4, wherein said interleukin is IL-4.

Claim 10 (Withdrawn) The allergy vaccine of claim 1, said vaccine further comprising interferon gamma.

Claim 11 (Withdrawn) The allergy vaccine of claim 1, wherein said interleukin receptor is selected from the group consisting of an IL-3 receptor, an IL-4 receptor, an IL-5 receptor, an IL-6 receptor, an IL-10 receptor, and an IL-13 receptor.

Claim 12 (Withdrawn) An allergy vaccine comprising at least one ingredient selected from the group consisting of an interleukin involved in production of IgE in a mammal, and a receptor for an interleukin involved in production of IgE in a mammal, in a pharmaceutically-acceptable carrier.

Claim 13 (Withdrawn) The allergy vaccine of claim 12, said vaccine further comprising interferon gamma.

Claim 14 (Withdrawn) An allergy vaccine comprising at least one ingredient selected from the group consisting of an IgE, an IgE receptor, an interferon-alpha, an interferon-alpha receptor, a histamine, a histamine receptor, a leukotriene, a leukotriene receptor, in a pharmaceutically-acceptable carrier.

Claim 15 (Withdrawn) The allergy vaccine of claim 14, said vaccine further comprising interferon gamma.

Claim 16 (Withdrawn) An allergy vaccine comprising at least one isolated nucleic acid encoding a protein selected from the group consisting of an IgE, an IgE receptor, an interleukin involved in production of IgE in a mammal, a receptor for an interleukin involved in production of IgE in a mammal, an interferon-alpha, an interferon-alpha receptor, a histamine, a histamine receptor, a leukotriene, a leukotriene receptor, in a pharmaceutically-acceptable carrier.

Claim 17 (Withdrawn) The allergy vaccine of claim 16, said vaccine further comprising interferon gamma.

Claim 18 (Withdrawn) The allergy vaccine of claim 16, said isolated nucleic acid further comprising a promoter/regulatory sequence operably linked thereto.

Claim 19 (Withdrawn) The allergy vaccine of claim 18, said isolated nucleic acid further comprising a vector.

Claim 20 (Withdrawn) A method of preventing an allergic response in a mammal, said method comprising administering to said mammal an allergy vaccine comprising at least one ingredient selected from the group consisting of an IgE, an IgE receptor, an interleukin involved in production of IgE in a mammal, a receptor for an interleukin involved in production of IgE in a mammal, an interferon alpha, an interferon alpha receptor, an interferon alpha, an interferon alpha receptor, a histamine, a histamine receptor, a leukotriene, a leukotriene receptor, thereby preventing an allergic response in a mammal.

Claim 21 (Withdrawn) The method of claim 20, wherein said interleukin is selected from the group consisting of IL-3, IL-4, IL-5, IL-6, IL-10, and IL-13.

Claim 22 (Withdrawn) The method of claim 21, wherein said interleukin is selected from the group consisting of IL-3, IL-4, IL-5, IL-6, and IL-13.

Claim 23 (Withdrawn) The method of claim 22, wherein said interleukin is selected from the group consisting of IL-3, IL-4, IL-5, and IL-13.

Claim 24 (Withdrawn) The method of claim 23, wherein said interleukin is selected from the group consisting of IL-4, IL-5, and IL-13.

Claim 25 (Withdrawn) The method of claim 24, wherein said interleukin is selected from the group consisting of IL-4 and IL-5.

Claim 26 (Withdrawn) The method of claim 25, wherein said interleukin is IL-4.

Claim 27 (Withdrawn) The method of claim 20, said method further comprising administering interferon gamma to said mammal.

Claim 28 (Withdrawn) A method of preventing an allergic response in a mammal, said method comprising administering to said mammal an allergy vaccine comprising at least one nucleic acid encoding an ingredient selected from the group consisting of an IgE, an IgE receptor, an interleukin involved in production of IgE in a mammal, a receptor for an interleukin involved in production of IgE in a mammal, an interferon alpha, an interferon alpha receptor, a histamine, a histamine receptor, a leukotriene, a leukotriene receptor, thereby preventing an allergic response in a mammal.

Claim 29 (Withdrawn) The method of claim 28, said isolated nucleic acid further comprising a promoter/regulatory sequence operably linked thereto.

Claim 30 (Withdrawn) The method of claim 28, said isolated nucleic acid further comprising a vector.

Claim 31 (Withdrawn) The method of claim 28, said method further comprising administering interferon gamma to said mammal.

Claim 32 (Withdrawn) A method of treating an allergy in a mammal, said method comprising administering to said mammal an allergy vaccine comprising at least one ingredient selected from the group consisting of an interleukin involved in the production of IgE in a mammal, and a receptor for an interleukin involved in the production of IgE in a mammal, thereby treating an allergy in a mammal.

Claim 33 (Withdrawn) The method of claim 32, wherein said interleukin is selected from the group consisting of IL-3, IL-4, IL-5, IL-6, IL-10, and IL-13.

Claim 34 (Withdrawn) The method of claim 32, said method further comprising administering interferon gamma to said mammal.

Claim 35 (Withdrawn) A method of treating an allergy in a mammal, said method comprising administering to said mammal an allergy vaccine comprising at least one ingredient selected from the group consisting of IgE, an IgE receptor, an interferon-alpha, an interferon-alpha receptor, a histamine, a histamine receptor, a leukotriene, and a leukotriene receptor, thereby treating an allergy in a mammal.

Claim 36 (Withdrawn) The method of claim 35, said method further comprising administering interferon gamma to said mammal.

Claim 37 (Withdrawn) A method of preventing an allergic response in a mammal, said method comprising administering to said mammal at least one ingredient selected from the group consisting of an anti-interleukin compound which is not an anti-interleukin antibody, wherein said interleukin is at least one interleukin involved in the production of IgE in a mammal, thereby preventing an allergic response in a mammal.

Claim 38 (Withdrawn) The method of claim 37, wherein said anti-interleukin compound is selected from the group consisting of a soluble interleukin receptor, and an antibody to an interleukin receptor.

Claim 39 (Withdrawn) The method of claim 38, wherein said interleukin involved in the production of IgE is selected from the group consisting of IL-3, IL-4, IL-5, IL-6, IL-10, and IL-13.

Claim 40 (Withdrawn) The method of claim 37, said method further comprising administering interferon gamma to said mammal.

Claim 41 (Previously Presented) A method of treating an allergy in a mammal, said method comprising administering to said mammal an anti-histamine antibody, thereby treating an allergy in a mammal.

Claim 42 (Canceled)

Claim 43 (Withdrawn) The method of claim 41, wherein said interleukin receptor is selected from the group consisting of an IL-3 receptor, an IL-4 receptor, an IL-5 receptor, an IL-6 receptor, and IL-10 receptor, and an IL-13 receptor.

Claim 44 (Withdrawn) The method of claim 41, wherein said interleukin receptor is selected from the group consisting of an IL-3 receptor, an IL-4 receptor, an IL-5 receptor, an IL-6 receptor, and IL-10 receptor, and an IL-13 receptor.

Claim 45 (Original) The method of claim 41, said method further comprising administering interferon gamma to said mammal.

Claim 46 (Withdrawn) A method of treating allergy an allergy in a mammal, said method comprising administering to said mammal at least one antisense nucleic acid complementary to a nucleic acid encoding a protein selected from the group consisting of IgE, an

IgE receptor, an interleukin involved in production of IgE in a mammal, a receptor for an interleukin involved in production of IgE in a mammal, an interferon-alpha, an interferon-alpha receptor, a histamine, a histamine receptor, a leukotriene, and a leukotriene receptor, thereby an allergy in a mammal.

Claim 47 (Withdrawn) The method of claim 46, wherein said interleukin is selected from the group consisting of IL-3, IL-4, IL-5, IL-6, IL-10, and IL-13.

Claim 48 (Withdrawn) The method of claim 46, said method further comprising administering interferon gamma to said mammal.

Claim 49 (Withdrawn) A kit for preventing an allergic response in a mammal, said kit comprising at least one allergy vaccine wherein said allergy vaccine comprises a protein selected from the group consisting of IgE, an IgE receptor, an interleukin involved in production of IgE in a mammal, a receptor for an interleukin involved in production of IgE in a mammal, an interferon-alpha, an interferon-alpha receptor, a histamine, a histamine receptor, a leukotriene, and a leukotriene receptor, an applicator, and an instructional material for the use thereof.

Claim 50 (Withdrawn) The kit of claim 49, said kit further comprising interferon gamma.

Claim 51 (Withdrawn) A kit for preventing an allergic response in a mammal, said kit comprising an allergy vaccine wherein said allergy vaccine comprises at least one nucleic acid encoding IgE, an IgE receptor, an interleukin involved in production of IgE, a receptor for an interleukin involved in production of IgE, an interferon-alpha, an interferon-alpha receptor, a histamine, a histamine receptor, a leukotriene, and a leukotriene receptor, wherein said interleukin is at least one interleukin involved in the production of IgE, an applicator, and an instructional material for the use thereof.

Claim 52 (Withdrawn) The kit of claim 51, said kit further comprising interferon gamma.

Claim 53 (Previously Presented) A kit for treating an allergy in a mammal, said kit comprising an anti-histamine antibody, an applicator, and an instructional material for the use thereof.

Claim 54 (Original) The kit of claim 53, said kit further comprising interferon gamma.

Claim 55 (Withdrawn) A kit for preventing an allergic response in a mammal, said kit comprising an allergy vaccine wherein said allergy vaccine comprises at least one nucleic acid encoding IgE, an IgE receptor, an interleukin involved in production of IgE, a receptor for an interleukin involved in production of IgE, an interferon-alpha, an interferon-alpha receptor, a histamine, a histamine receptor, a leukotriene, and a leukotriene receptor, wherein said interleukin is at least one interleukin involved in the production of IgE, an applicator, and an instructional material for the use thereof.

Claim 56 (Withdrawn) The kit of claim 55, said kit further comprising interferon gamma.

Claim 57 (Withdrawn) A method of inhibiting production of IgE in a mammal, said method comprising administering to said mammal at least one ingredient selected from the group consisting of an IgE, an IgE receptor, an interleukin involved in production of IgE in a mammal, a receptor for an interleukin involved in production of IgE in a mammal, an interferon-alpha, an interferon-alpha receptor, a histamine, a histamine receptor, a leukotriene, and a leukotriene receptor, thereby inhibiting IgE production in a mammal.

Claim 58 (Withdrawn) The method of claim 57, wherein said interleukin is selected from the group consisting of IL-3, IL-4, IL-5, IL-6, IL-10, and IL-13.

Claim 59 (Withdrawn) The method of claim 57, said method further comprising administering interferon gamma to said mammal.

Claim 60 (Withdrawn) A method of inhibiting production of IgE in a mammal, said method comprising administering to said mammal at least one nucleic acid encoding a protein selected from the group consisting of an IgE, an IgE receptor, an interleukin involved in production of IgE in a mammal, a receptor for an interleukin involved in production of IgE in a mammal, an interferon-alpha, an interferon-alpha receptor, a histamine, a histamine receptor, a leukotriene, and a leukotriene receptor, thereby inhibiting IgE production in a mammal.

Claim 61 (Withdrawn) The method of claim 60, said method further comprising administering interferon gamma to said mammal.

Claim 62 (Previously Presented) A method of inhibiting production of IgE in a mammal, said method comprising administering to a mammal an anti-histamine antibody, thereby inhibiting production of IgE in a mammal.

Claim 63 (Canceled)

Claim 64 (Currently Amended) The method of claim ~~63~~ 62, said method further comprising administering interferon gamma to said mammal.

Claim 65 (Withdrawn) A method of inhibiting production of IgE in a mammal, said method comprising administering to said mammal at least one antisense nucleic acid complementary to a nucleic acid encoding a protein selected from the group consisting of an IgE, an IgE receptor, an interleukin involved in production of IgE in a mammal, a receptor for an interleukin involved in production of IgE in a mammal, an interferon-alpha, an interferon-alpha receptor, a histamine, a histamine receptor, a leukotriene, and a leukotriene receptor, thereby inhibiting production of IgE in a mammal.

Claim 66 (Withdrawn) The method of claim 65, wherein said interleukin is selected from the group consisting of IL-3, IL-4, IL-5, IL-6, IL-10, and IL-13.

Claim 67 (Withdrawn) The method of claim 66, said method further comprising administering interferon gamma to said mammal.

Claim 68 (Withdrawn) A kit for inhibiting production of IgE in a mammal, said kit comprising at least one protein selected from the group consisting of IgE, an IgE receptor, an interleukin involved in the production of IgE, a receptor for an interleukin involved in production of IgE, an interferon-alpha, an interferon-alpha receptor, a histamine, a histamine receptor, a leukotriene, and a leukotriene receptor, an applicator, and an instructional material for the use thereof.

Claim 69 (Withdrawn) The kit of claim 68, said kit further comprising interferon gamma.

Claim 70 (Withdrawn) A kit for inhibiting production of IgE in a mammal, said kit comprising an isolated nucleic acid encoding at least one protein selected from the group consisting of IgE, an IgE receptor, an interleukin involved in the production of IgE, a receptor for an interleukin involved in production of IgE, an interferon-alpha, an interferon-alpha receptor, a histamine, a histamine receptor, a leukotriene, and a leukotriene receptor, an applicator, and an instructional material for the use thereof.

Claim 71 (Withdrawn) The kit of claim 70, said kit further comprising interferon gamma.

Claim 72 (Previously Presented) A kit for inhibiting production of IgE in a mammal, said kit comprising an anti-histamine antibody, an applicator, and an instructional material for the use thereof.

Claim 73 (Original) The kit of claim 72, said kit further comprising interferon gamma.

**Claim 74 (Withdrawn)** A kit for inhibiting production of IgE in a mammal, said kit comprising an antisense nucleic acid complementary to a nucleic acid encoding at least one ingredient selected from the group consisting of IgE, an IgE receptor, an interleukin involved in the production of IgE in a mammal, a receptor for an interleukin involved in production of IgE in a mammal, an interferon-alpha, an interferon-alpha receptor, a histamine, a histamine receptor, a leukotriene, and a leukotriene receptor, an applicator, and an instructional material for the use thereof.

**Claim 75 (Withdrawn)** The kit of claim 74, said kit further comprising interferon gamma.

**Claim 76 (Withdrawn)** A kit for preventing an allergic response in a mammal, said kit comprising a pharmaceutical composition comprising at least one allergy vaccine in an amount effective for preventing an allergic response in a mammal in a pharmaceutically acceptable carrier, wherein said allergy vaccine comprises a protein selected from the group consisting of IgE, an IgE receptor, an interleukin involved in the production of IgE in a mammal, a receptor for an interleukin involved in the production of IgE in a mammal, an interferon-alpha, an interferon-alpha receptor, a histamine, a histamine receptor, a leukotriene, and a leukotriene receptor, an applicator, and an instructional material for the use thereof.

**Claim 77 (Withdrawn)** The kit of claim 76, said kit further comprising interferon gamma.

**Claim 78 (Withdrawn)** A kit for preventing an allergic response in a mammal, said kit comprising a pharmaceutical composition comprising an allergy vaccine in a pharmaceutically acceptable carrier in an amount effective for preventing an allergic response in a mammal, wherein said allergy vaccine comprises a protein selected from the group consisting of IgE, an IgE receptor, an interleukin involved in the production of IgE in a mammal, a receptor for an interleukin involved in the production of IgE in a mammal, an interferon-alpha, an interferon-alpha receptor, a histamine, a histamine receptor, a leukotriene, and a leukotriene receptor, an applicator, and an instructional material for the use thereof.

Claim 79 (Withdrawn) The kit of claim 78, said kit further comprising interferon gamma.

Claim 80 (Canceled)

Claim 81 (Canceled)

Claim 82 (Withdrawn) A kit for treating an allergy in a mammal, said kit comprising a pharmaceutical composition comprising an antisense nucleic acid in an amount effective for treating an allergy in a mammal in a pharmaceutically acceptable carrier, wherein said antisense nucleic acid is complementary to a nucleic acid encoding at least one ingredient selected from the group consisting of IgE, an IgE receptor, an interleukin involved in the production of IgE in a mammal, a receptor for an interleukin involved in the production of IgE in a mammal, an interferon-alpha, an interferon-alpha receptor, a histamine, a histamine receptor, a leukotriene, and a leukotriene receptor, an applicator, and an instructional material for the use thereof.

Claim 83 (Withdrawn) The kit of claim 82, said kit further comprising interferon gamma.

Claim 84 (Withdrawn) A pharmaceutical composition comprising at least one protein selected from the group consisting of an IgE, an IgE receptor, an interleukin involved in the production of IgE in a mammal, a receptor for an interleukin involved in the production of IgE in a mammal, an interferon-alpha, an interferon-alpha receptor, a histamine, a histamine receptor, a leukotriene, and a leukotriene receptor, in a pharmaceutically acceptable carrier in an amount effective for preventing an allergic response in a mammal.

Claim 85 (Withdrawn) The pharmaceutical composition of claim 84, said composition further comprising interferon gamma.

Claim 86 (Withdrawn) A pharmaceutical composition comprising at least one isolated nucleic acid encoding a protein selected from the group consisting of an IgE, an IgE receptor, an interleukin involved in the production of IgE in a mammal, a receptor for an interleukin involved in the production of IgE in a mammal, an interferon-alpha, an interferon-alpha receptor, a histamine, a histamine receptor, a leukotriene, and a leukotriene receptor, in a pharmaceutically acceptable carrier, in an amount effective for preventing an allergic response in a mammal.

Claim 87 (Withdrawn) The pharmaceutical composition of claim 86, said composition further comprising interferon gamma.

Claim 88 (Previously Presented) A pharmaceutical composition comprising a protein in an amount effective for treating an allergy in a mammal, wherein said protein is an anti-histamine antibody in a pharmaceutically acceptable carrier.

Claim 89 (Original) The pharmaceutical composition of claim 88, said composition further comprising interferon gamma.

Claim 90 (Withdrawn) A method of treating an allergy in a mammal, said method comprising administering to said mammal at least one first ingredient selected from the group consisting of an anti-IL-3 antibody, an anti-IL-4 antibody, an anti-IL-5 antibody, an anti-IL-6 antibody, an anti-IL-10 antibody, and an anti-IL-13 antibody, and at least one second ingredient selected from the group consisting of an anti-IgE antibody, an anti-IgE receptor antibody, a soluble IgE receptor, an anti-interleukin receptor antibody, a soluble interleukin receptor, an anti-interferon-alpha antibody, an anti-interferon-alpha receptor antibody, a soluble interferon-alpha receptor, an anti-histamine antibody, an anti-histamine receptor antibody, a soluble histamine receptor, an anti-leukotriene antibody, an anti-leukotriene receptor antibody, and a soluble leukotriene receptor, wherein said interleukin is at least one interleukin involved in the production of IgE in a mammal, thereby treating an allergy in a mammal.

Claim 91 (Withdrawn) The method of claim 90, wherein said interleukin involved in the production of IgE is selected from the group consisting of IL-3, IL-4, IL-5, IL-6, IL-10, and IL-13.

Claim 92 (Withdrawn) The method of claim 90, wherein said interleukin receptor is selected from the group consisting of an IL-3 receptor, an IL-4 receptor, an IL-5 receptor, an IL-6 receptor, an IL-10 receptor, and an IL-13 receptor.

Claim 93 (Withdrawn) The method of claim 90, wherein said antibody to an interleukin receptor is selected from the group consisting of an antibody to an IL-3 receptor, an antibody to an IL-4 receptor, an antibody to an IL-5 receptor, an antibody to an IL-6 receptor, an antibody to an IL-10 receptor, and an antibody to an IL-13 receptor.

Claim 94 (Withdrawn) The method of claim 90, said method further comprising administering interferon gamma to said mammal.

Claim 95 (Withdrawn) A method of treating bronchial asthma in a human, said method comprising administering to a human an anti-histamine antibody, thereby treating bronchial asthma in a human.

Claim 96-97 (Canceled)

Claim 98 (Withdrawn) The method of claim 95, said method further comprising administering interferon gamma to said human.

Claim 99 (Canceled)

Claim 100 (Withdrawn) The method of claim 41 wherein said mammal is a human.

Claim 101 (Withdrawn) The method of claim 62 wherein said mammal is a human.